

REMARKS

Claims 1-3, 7-10, 12, 14 and 16-27 were pending in the application. Claims 16, 23-25 and 27 were withdrawn. Claim 28 is added and recites elected subject matter. Claims 1, 10, 19, 20 and 26 have been amended. Claims 9 and 18 have been canceled. Therefore, claims 1-3, 7, 8, 10, 12, 14, 17, 19-22, 26 and 28 are now being considered in the application. Reconsideration of the application is requested for at least the reasons that follow.

Applicant appreciates the Examiner's acknowledgement that claims 10 and 20 contain allowable subject matter. Applicant has rewritten claims 10 and 20 into independent form. Therefore, Applicant submits that claims 10 and 20 are in condition for allowance.

Specification

The Office Action objects to the title of the invention for not clearly indicating the invention to which the claims are directed. Applicant has amended the title as appropriate. Applicant respectfully requests reconsideration and withdrawal of the objection.

Prior Art Rejections**Claims 1-3, 7-9, 12, 14, 17-19, 21, 22 and 26: Kashima**

Claims 1-3, 7, 9, 12, 14, 17, 18 and 26 are rejected over 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 6,094,300 (hereinafter "Kashima"). In addition, claims 8, 19, 21 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kashima. Applicant traverses the rejections for at least the following reasons.

Claim 1 recites a scanning microscope system comprising, among other things "a scanning microscope ... a light source that emits an exciting light beam ... and that emits a stimulating light beam ... and at least one detector." The rejection of claim 1 should be withdrawn at least because Kashima fails to disclose, teach or suggest the recitations of claim 1. For example, Kashima fails to disclose, teach or suggest "wherein the module comprises means for influencing the shape of the focus of the stimulating light beam in a focal region," as required by amended claim 1. Kashima merely discloses a laser scanning microscope with a first laser light source (100) that outputs coherent light to scan a specimen (110) and a

second laser light source (2) that outputs coherent light onto a given region of the specimen (110). The Office Action states that Kashima has “optics for spreading (scanning mirrors) or influencing the shape of the focus of the stimulating light beam.” Office Action at p. 3, § 4. Applicants respectfully disagree. The multiple optical elements (102a, 102b; or 4a, 4b) are merely scanning mirrors that deflect the coherent light arbitrarily; the scanning mirrors do *not* influence “the shape of the focus of the stimulating light beam in a focal region,” as required by claim 1. In contrast, please see Figure 4 and related text of this application. Therefore, Applicants respectfully request reconsideration and withdrawal of the rejection.

Claims 2, 3, 7, 8, 21, and 22 depend from claim 1 and are allowable therewith, for at least the reasons set forth above, without regard to the further patentable limitations set forth in these dependent claims. For example, Kashima fails to disclose, teach or suggest “wherein the module comprises at least one retardation plate,” as required by claim 8. The Office Action states that “retardation plates are notoriously well known in the art to adjust the polarization of a beam.” Office Action at p. 4, § 7. Claim 8, which depends on claim 1, requires a means to influence the shape of the focus of the stimulating beam. The present invention does not require or desire to influence the polarization. Furthermore, a retardation plate arranged to merely influence the polarization will not work because the present invention requires a retardation plate that must be arranged so that it is transilluminated by the central portion of the stimulating light beam (9) and must be located in a Fourier plane conjugated with the focal plane in the specimen (25). *See* Specification at p. 8, lines 13-17.

As another example, Kashima fails to disclose, teach or suggest “wherein the multiple optical elements comprise a liquid crystal array,” as required by claim 21. The Office Action states that “it is well known that liquid crystal arrays provide adjustable degrees of retardation.” Office Action at p. 5, §7. However, claim 21 does not require adjustable degrees of retardation. Rather, the present application has a different retardation for different pixels of the liquid crystal array for influencing the shape of the focus and the liquid crystal array must be controlled in a particular manner. *See* Specification at p. 9, lines 8-19. Thus, one of ordinary skill in the art would not implement a liquid crystal display into the apparatus of Kashima.

Independent claim 26 contains recitations similar to claim 1. For example, claim 26 comprises, among other things, “means for influencing the shape of the focus of the stimulating light beam in a focal region.” Therefore, Applicant respectfully requests reconsideration and withdrawal of the rejection.

Claims 12, 14, 17 and 19 depend from claim 26 and are allowable therewith, for at least the reasons set forth above, without regard to the further patentable limitations set forth in these dependent claims.

Claims 1-3, 7, 8, 12, 14, 17, 19, 21 and 26: Dorsel

Claims 1-3, 7, 9, 12, 14, 17, 18 and 26 are rejected over 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,320,196 (hereinafter “Dorsel”). In addition, claims 8, 19, 21 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dorsel. Applicant traverses the rejections for at least the following reasons.

The rejection of claim 1 should be withdrawn at least because Dorsel fails to disclose, teach or suggest the recitations of claim 1. For example, Dorsel fails to disclose, teach or suggest “wherein the module comprises means for influencing the shape of the focus of the stimulating light beam in a focal region,” as required by amended claim 1. Dorsel merely discloses a multichannel high dynamic range scanner with laser beams (36, 41), detectors (90, 95), mirror (60) and objective lens (65). The Office Action states that Dorsel comprises “optics for focusing (65) or influencing the shape of the focus of the stimulating light beam.” Office Action at p. 4, §5. On the contrary, reference numeral (65) refers to an objective lens. The objective lens merely generates a focus, the objective lens does not influence the shape of the focus. The shape of the focus does not change with an objective lens. Therefore, Applicants respectfully request reconsideration and withdrawal of the rejection.

Claims 2, 3, 7, 8 and 21 depend from claim 1 and are allowable therewith, for at least the reasons set forth above, without regard to the further patentable limitations set forth in these dependent claims. For example, Dorsel fails to disclose, teach or suggest “wherein the module comprises at least one retardation plate,” as required by claim 8. As stated above, claim 8 requires a means to influence the shape of the focus of the stimulating beam. The

present invention does not require or desire to influence the polarization. Furthermore, a retardation plate arranged to merely influence the polarization will not work because the present invention requires a retardation plate that must be arranged so that it is transilluminated by the central portion of the stimulating light beam (9) and must be located in a Fourier plane conjugated with the focal plane in the specimen (25).

As another example, Dorsel fails to disclose, teach or suggest “wherein the multiple optical elements comprise a liquid crystal array,” as required by claim 21. As stated above, claim 21 does not require adjustable degrees of retardation; rather, the present application has a different retardation for different pixels of the liquid crystal array for influencing the shape of the focus and the liquid crystal array must be controlled in a particular manner. Thus, one of ordinary skill in the art would not implement a liquid crystal display into the apparatus of Dorsel.

Independent claim 26 contains recitations similar to claim 1. For example, claim 26 comprises, among other things, “means for influencing the shape of the focus of the stimulating light beam in a focal region.” Therefore, Applicant respectfully requests reconsideration and withdrawal of the rejection.

Claims 12, 14, 17 and 19 depend from claim 26 and are allowable therewith, for at least the reasons set forth above, without regard to the further patentable limitations set forth in these dependent claims.

New claim 28 is patentable for similar reasons.

Conclusion

Applicant believes that the present application is now in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment,

to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicant hereby petitions for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

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